IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of Antonius H.M. Akkermans	Examiner: Jorge L. Ortiz-Criado
DEVICE FOR READING AND/OR WRITING INFORMATION FROM/ONTO AN OPTICAL INFORMATION CARRIER	I hereby certify that this correspondence is being deposited today with the United States Postal Services as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patent Commissioner for Patents P.O. Box 1450 Alexandria VA. 22313-1450
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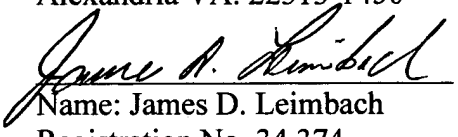
Filed: November 2, 2000	
Confirmation No. 2515	 Name: James D. Leimbach Registration No. 34,374
Group Art Unit: 2656	Date: March 14, 2006

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Honorable Commissioner of Patents and Trademarks
Alexandria VA. 22313-1450

Sir:

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Real party in interest

The real party of interest is the Assignee who is U. S. Philips Corporation, a corporation existing under the laws of the State of Delaware (hereinafter Appellant).

Related appeals and interferences

There are no related appeals or interferences to the present application that are known to appellants, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of the Claims

Claims 1-20 are drawn to a method and apparatus for reading and/or writing information from/onto an optical information carrier; said information stored in the form of differences in intensity level. Claims 1-5, 7-11, and 13-20 are rejected. Claims 6 and 12 are objected to as being dependent upon a rejected base claim but otherwise stated as being allowable. A copy of claims 1-20 is contained in Appendix III following this brief.

Status of the Amendments After Final

A response was filed subsequent to the final rejection to overcome the Examiner's rejection of claims 1-5, 7-11, and 13-20 under 35 U.S.C. §103(a). The Examiner in an Advisory Action dated December 29, 2005 indicated that the rejections of claims 1-5, 7-11, and 13-20 under the provisions of 35 U.S.C. §103(a) stand.

Summary of the Claimed Subject Matter

The appealed claims define subject matter for a method and device for embedding the same supplemental data samples at corresponding predetermined positions on a signal.

Appealed claim 1 defines subject matter for a device for reading and/or writing information from/onto an optical information carrier 1 as shown in Figure 1, wherein the information stored in the form of differences in intensity level as described on page 3, lines 6-9 of the specification.

Appealed claim 1 further defines subject matter for read means 2 as shown in Figures 1 and 2 including imaging means 21, 22, 23 as shown in Figure 2 for imaging a radiation

beam so as to form a scanning spot 11 by means of which the information carrier is scanned as described in the specification on page 3, lines 3-6, including detection means 25, 26 as shown in Figure 2 for generating a read signal which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot 11 as described in the specification on page 3, lines 7-9.

Appealed claim 1 further defines subject matter for which device has an information transfer mode, in which the scanning spot is moved in a first direction with respect to the information carrier as described in the specification on page 3, lines 14-17.

Appealed claim 1 further defines subject matter for which the device has a displacement mode, in which the scanning spot is moved in a second direction transverse to the first direction as described in the specification on page 3, lines 18-21.

Appealed claim 1 further defines subject matter for control means 40, 41 as shown in Figure 1 for controlling the imaging means in response to a measurement signal which is indicative of the degree of focusing of the radiation beam at the location of the scanning spot, which control means include sample and hold means for sampling and holding the measurement signal in response to a sample signal as described in the specification on page 3, lines 22-26. Appealed claim 1 further defines subject matter for wherein the sample signal (S_{CNTRL}) causes the measurement signal to be sampled at locations having mutually the same intensity level, and to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time as described in the specification on page 4, lines 11-17.

Appealed claim 2 defines the subject matter of appealed claim1, wherein the sample signal is responsive to a time during which the measurement signal is held causing the measurement signal to be sampled when the time exceeds the predetermined period of time as described in the specification on page 4, lines 14-17.

Appealed claim 3 defines subject matter for a device for reading and recording information on an optical information carrier 1 as shown in Figure 1, the information carrier having information stored as patterns formed by differences in intensity levels as described on page 3, lines 6-9 of the specification.

Appealed claim 3 further defines subject matter for a read system 2 as shown in Figures 1 and 2 adapted to read data from said optical information carrier, said read system further comprising a radiation beam source 20, a radiation beam 24, a device for focusing said

radiation beam 21, 22, 23 as shown in Figure 2, a scanning spot 11 formed with said focused radiation beam and proximate said optical information carrier 1 as described in the specification on page 3, lines 2-13, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier as described in the specification on page 3, lines 14-21, and for generating a read signal which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot 11 as described in the specification on page 3, lines 7-9, said read system further adapted to derive, from said optical information carrier via said scanning spot 11, a measurement signal FE, a radial error signal RE, and an information signal S_{INFO} as described in the specification on page 3, line 22-page 4, line 10.

Appealed claim 3 further defines subject matter for a signal generation system D1, D2,D3, D4operatively coupled to said read system, said signal generation system adapted to produce a sample signal (S_{CNTRL}) to control sampling of said measurement signal FE, the sample signal (S_{CNTRL}) proportional to the intensity of said scanning spot 11, and wherein said sample signal (S_{CNTRL}) causes the measurement signal FE to be sampled at locations having mutually the same intensity level and wherein said sample signal causes the measurement signal to be sampled if the measurement signal has not been sampled within a predetermined time interval as described in the specification on page 4, lines 11-17.

Appealed claim 9 defines subject matter for a method of reading information stored on an optical information carrier 1 as shown in Figure 1. Appealed claim 9 further defines subject matter for providing an optical information carrier 1, said optical information carrier having a multilevel structure as described in the specification on page 5, lines 25-29, and the optical information carrier bearing data recorded as patterns formed in the information carrier by differences in intensity levels as described on page 3, lines 6-9 of the specification.

Appealed claim 9 further defines subject matter for providing a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source 20, a radiation beam 24, a device for focusing said radiation beam 21, 22, 23 as shown in Figure 2, a scanning spot 11 formed with said focused radiation beam and proximate said optical information carrier as described in the specification on page 3, lines 2-13, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier as described in the specification on page

3, lines 14-21, and for generating a read signal which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot 11 as described in the specification on page 3, lines 7-9, said read system further adapted to derive, from said optical information carrier via said scanning spot 11, a measurement signal FE, a radial error signal RE, and an information signal S_{INFO} as described in the specification on page 3, line 22-page 4, line 10.

Appealed claim 9 further defines subject matter for providing a signal generation system D1, D2, D3, D4 operatively coupled to said read system, said signal generation system adapted to produce a sample signal (S_{CNTRL}) to control sampling of said measurement signal FE, said sample signal (S_{CNTRL}) proportional to the intensity of said scanning spot 11, and wherein said sample signal (S_{CNTRL}) causes the measurement signal FE to be sampled at locations having mutually the same intensity level and if the measurement signal has not been sampled to cause sampling of the measurement single within a predetermined time period as described in the specification on page 4, lines 1-27.

Appealed claim 15 defines subject matter for an apparatus for employing an optical information carrier as shown in Figure 1. Appealed claim 15 further defines subject matter device for reading and recording information on the optical information carrier 1 as shown in Figure 1, said information carrier having information stored as patterns formed by differences in levels as described on page 3, lines 6-9 of the specification.

Appealed claim 15 further defines subject matter for a read system 2 as shown in Figures 1 and 2 adapted to read data from said optical information carrier 1, said read system further comprising a radiation beam source 20, a radiation beam 24, a device for focusing said radiation beam 21, 22, 23 as shown in Figure 2, a scanning spot 11 formed with said focused radiation beam and proximate said optical information carrier 1 as described in the specification on page 3, lines 2-13, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier as described in the specification on page 3, lines 14-21, and a device for deriving, from said optical information carrier via said scanning spot, a measurement signal FE, a radial error signal RE, and an information signal S_{INFO} as described in the specification on page 3, line 22-page 4, line 10.

Appealed claim 15 further defines subject matter for a signal generation system operatively coupled D1, D2, D3, D4 to said read system, said signal generation system adapted

to produce a sample signal (S_{CNTRL}) to control sampling of said measurement signal FE, said sample signal (S_{CNTRL}) proportional to the intensity of said scanning spot 11, and wherein said sample signal (S_{CNTRL}) causes the measurement signal FE to be sampled when said intensity is comparatively high and wherein if the measurement signal is not sampled within a predetermined time period then said sample signal causes the measurement signal to be sampled as described in the specification on page 4, lines 1-27.

Grounds of Rejection to be Reviewed on Appeal

The Advisory Action dated December 29, 2005 indicated that the rejections to claims 1-5, 7-11, and 13-20 under the provisions of 35 U.S.C. §103(a) stand. Claims 1-5, 7-11, and 13-20 are the appealed claims. Appealed claims 1-5, 7-11, and 13-20 are rejected under the provisions of 35 U.S.C. §103(a) has been obvious over U.S. Patent No. 4,561,082 issued to Gerard, et al. (hereinafter referred to as *Gerard et al.*) in view of JP No. 09-3200070 by Nakano (hereinafter referred to as *Nakano*).

Argument

I. The rejection of appealed claims 1-5, 7-11, and 13-20 under the provisions of 35 U.S.C. §103(a) as being obvious over *Gerard et al.* in view of *Ohsawa*

A. The rejection under 35 U.S.C. S 103(a)

Appealed claims 1-5, 7-11, and 13-20 stand rejected under the provisions of 35 U.S.C. §103 (a) as being obvious over *Gerard et al.* (U.S. Patent No. 4,561,082) in view of *Nakano* (JP No. 09-3200070).

The examiner's position is that it would have been obvious to one of ordinary skill within the art to apply the teaching of *Nakano* for periodic sampling using a Focus Error (FE) signal to the process and system taught by *Gerard et al.* for reading and recording on a data carrier to create the subject matter defined by appealed claims 1-5, 7-11, and 13-20.

The MPEP at §2142 states that in order to "establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary

skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The MPEP at §2143.01 discusses the requisite suggestion or motivation needed for the Modification of references. "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)

The MPEP at §2143.01 further states that if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

B. The references

Gerard et al. (U.S. Patent No. 4,561,082) disclose a device, for reading and or writing information from/onto an optical information carrier, said information stored in the form of differences in intensity level (see col. 1, lines 39-43). *Gerard et al.* further disclose a device that includes a read mechanism for imaging a radiation beam so as to form a scanning spot by means of which the information carrier is scanned, and a detection device that generates a read signal indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot (col. 1, lines 9-15; col. 2, lines 39-56; col. 3, lines 24-46). *Gerard et al.* use a data carrier that has pre-etched areas that allow tracking by creating discrete or "flag" elements (see col. 2, lines 23-26). It should be noted that a basic premise of *Gerard et al.* relates to focusing using a data carrier of the pre-etched type (see col. 4, lines 31-36).

Gerard et al. further disclose a device that detects a reading beam from a disc, wherein photodetecting and signal processing deliver an error signal for controlling a motor 2 that steers the position of mirror M_1 for radial control and another error signal for controlling a coil for focus control (see col. 5, lines 47-55).

Figure 5 of *Gerard et al.* illustrates circuits that are used to for generating vertical control signals used in focus control. The description within *Gerard et al.* from col. 8, line 41-col. 9, line 27 discusses the sampling that takes place within the circuit shown in Figure 5. *Gerard et al.* clearly teaches that upon the concurrence of a logic state "0" in the radiation coming from the area illuminated by spot 3 (indicative of an unwritten area on the disc) with the appearance of clock pulse H, the reflection from the unwritten area on the disc is sampled. *Gerard et al.* teach that this concurrence of events occurs only when the detected signal V_D from the photodetecting cells passes below a given threshold lines (see col. 8, lines 64-66). Therefore, *Gerard et al.* defines that the reflection signal is measured at comparatively low levels of intensity. The discussion on col. 11, lines 29-63 of *Gerard et al.* relates to the generation of the focus error signal V_D and does not discuss sampling. *Gerard et al.* makes no disclosure or suggestion towards determining if the measurement signal is not sampled within a predetermined time period and causing the measurement signal to be sampled after expiration of that time period.

Nakano discloses an apparatus for an optical information carrier employing focus control the employs an error signal detecting circuit that sample a focus error signal every sampling period to attenuate crosstalk (see Abstract). In order to solve a problem related to cross talk, *Nakano* teaches that the focal error signal is detected. The focal error signal is sampled every sampling period T to stabilize the focus control (see paragraphs 14-16). *Nakano* teaches periodic sampling using a Focus Error (FE) signal. It should be noted that there is no disclosure or suggestion within *Nakano* for the sampling not to be periodic. In order to control cross talk, *Nakano* requires that focal error signal be sampled every sampling period T.

C. The differences between the invention and the references

Appealed claim 1

Appealed claim 1 defines subject matter for control means for controlling the imaging means in response to a measurement signal which is indicative of the degree of focusing of the radiation beam at the location of the scanning spot, which control means include sample and hold means for sampling and holding the measurement signal in response to a sample signal, wherein the sample signal (S_{CNTRL}) causes the measurement signal to be sampled at locations

having mutually the same intensity level, and to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time. *Gerard et al.* specifically teaches to sample that upon the occurrence of a clock pulse H simultaneously with an unwritten area of the disc represented by a logic state "0". It would defeat the purpose of *Gerard et al.* to sample at a point in which the radiation coming from the area illuminated by spot 3 were not on an unwritten area on the disc. The modification proposed by the rejection would render *Gerard et al.* so modified unsatisfactory for its intended purpose, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, there is no suggestion or motivation to make the proposed modification. *Gerard et al.* make no disclosure or suggestion to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time.

The modification proposed by the combination made by the rejection would change the principle of operation of *Gerard et al.* so modified, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

The modification proposed by the rejection would render *Nakano* so modified unsatisfactory for its intended purpose because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, there is no suggestion or motivation to make the proposed modification. *Nakano* makes no disclosure or suggestion for to the measurement signal to be sampled at locations having mutually the same intensity level.

The modification proposed by the combination made by the rejection would change the principle of operation of *Nakano* so modified, because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

Appealed claim 2

Appealed claim 2 defines subject matter for the device defined by appealed claimed 1, wherein the sample signal is responsive to a time during which the measurement signal is held causing the measurement signal to be sampled when the time exceeds the

predetermined period of time. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the sample signal to be responsive to a time during which the measurement signal is held causing the measurement signal to be sampled when the time exceeds the predetermined period of time.

Appealed claim 3

Appealed claim 3 defines subject matter for a device for reading and recording information on an optical information carrier with a signal generation system adapted to produce a sample signal to control sampling of the measurement signal, the sample signal being proportional to the intensity of the scanning spot, wherein the sample signal causes the measurement signal to be sampled at locations having mutually the same intensity level and wherein the sample signal causes the measurement signal to be sampled if the measurement signal has not been sampled within a predetermined time interval.

Gerard et al. specifically teaches to sample that upon the occurrence of a clock pulse H simultaneously with an unwritten area of the disc represented by a logic state "0". It would defeat the purpose of *Gerard et al.* to sample at a point in which the radiation coming from the area illuminated by spot 3 were not on an unwritten area on the disc. The modification proposed by the rejection would render *Gerard et al.* so modified unsatisfactory for its intended purpose, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, there is no suggestion or motivation to make the proposed modification. *Gerard et al.* make no disclosure or suggestion to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time.

The modification proposed by the combination made by the rejection would change the principle of operation of *Gerard et al.* so modified, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

The modification proposed by the rejection would render *Nakano* so modified unsatisfactory for its intended purpose because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, there is no suggestion or motivation to make the proposed modification. *Nakano* makes no

disclosure or suggestion for to the measurement signal to be sampled at locations having mutually the same intensity level.

The modification proposed by the combination made by the rejection would change the principle of operation of *Nakano* so modified, because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

Appealed claim 4

Appealed claim 4 defines subject matter for the device of appealed claim 3, wherein the intensity of the scanning spot is an indicator of a location of the scanning spot with respect to the patterns provided in the information carrier. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the intensity of the scanning spot is an indicator of a location of the scanning spot with respect to the patterns provided in the information carrier.

Appealed claim 5

Appealed claim 5 defines subject matter for the device of appealed claim 3, wherein the sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said signal generation system. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter defined by appealed claim 3 wherein the sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said signal generation system.

Appealed claim 7

Appealed claim 7 defines subject matter for the device of appealed claim 3, wherein said read system is adapted to operate in two operational modes: an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and a displacement mode wherein said motion control device provides motion of said scanning spot in

a radial second direction, wherein said radial transverse direction is transverse to said first direction. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter defined by appealed claim 3 wherein said read system is adapted to operate in two operational modes: an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

Appealed claim 8

Appealed claim 8 defines the subject matter of appealed claim 3, wherein the read system further comprises a system for generating a logic signal which indicates that information is recorded on the information carrier in the form of differences in level of a surface of the information carrier. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter defined by appealed claim 3 wherein the read system further comprises a system for generating a logic signal which indicates that information is recorded on the information carrier in the form of differences in level of a surface of the information carrier.

Appealed claim 9

Appealed claim 9 defines subject matter for a method of reading information stored on an optical information carrier including providing a signal generation system operatively coupled to the read system, the signal generation system adapted to produce a sample signal to control sampling of said measurement signal, the sample signal proportional to the intensity of the scanning spot, and wherein the sample signal causes the measurement signal to be sampled at locations having mutually the same intensity level and if the measurement signal has not been sampled to cause sampling of the measurement single within a predetermined time period.

Gerard et al. specifically teaches to sample that upon the occurrence of a clock pulse H simultaneously with an unwritten area of the disc represented by a logic state "0". It would defeat the purpose of *Gerard et al.* to sample at a point in which the radiation coming

from the area illuminated by spot 3 were not on an unwritten area on the disc. The modification proposed by the rejection would render *Gerard et al.* so modified unsatisfactory for its intended purpose, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, there is no suggestion or motivation to make the proposed modification. *Gerard et al.* make no disclosure or suggestion to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time.

The modification proposed by the combination made by the rejection would change the principle of operation of *Gerard et al.* so modified, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

The modification proposed by the rejection would render *Nakano* so modified unsatisfactory for its intended purpose because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, there is no suggestion or motivation to make the proposed modification. *Nakano* makes no disclosure or suggestion for to the measurement signal to be sampled at locations having mutually the same intensity level.

The modification proposed by the combination made by the rejection would change the principle of operation of *Nakano* so modified, because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

Appealed claim 10

Appealed claim 10 defines the method of Claim 9, wherein said intensity of said scanning spot is used as an indication of a location of the scanning spot with respect to the patterns provided in the information carrier. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the intensity of the scanning spot is an indicator of a location of the scanning spot with respect to the patterns provided in the information carrier.

Appealed claim 11

Appealed claim 11 defines subject matter for the method of appealed claim 9, wherein the sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said sign al generation system. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter of appealed claim 9 wherein the sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said sign al generation system.

Appealed claim 13

Appealed claim 13 defines the subject matter of the method of appealed claim 9, wherein the read system is adapted to operate in two operational modes: an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter of appealed claim 9 wherein the read system is adapted to operate in two operational modes: an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

Appealed claim 14

Appealed claim 14 defines the subject matter for the method of appealed claim 9, wherein said sampling of the measurement signal when said intensity is comparatively high results in a reduction of radial-to-vertical crosstalk. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter of wherein the sampling of the measurement signal when said intensity is comparatively high results in a reduction of radial-to-vertical crosstalk.

Appealed claim 15

Appealed claim 15 defines subject matter for an apparatus for employing an optical information carrier, the apparatus including a signal generation system operatively coupled to a read system, with the signal generation system adapted to produce a sample signal to control sampling of said measurement signal, the sample signal proportional to the intensity of said scanning spot, and the sample signal causes the measurement signal to be sampled when said intensity is comparatively high and wherein if the measurement signal is not sampled within a predetermined time period then the sample signal causes the measurement signal to be sampled.

Gerard et al. specifically teaches to sample that upon the occurrence of a clock pulse H simultaneously with an unwritten area of the disc represented by a logic state "0". It would defeat the purpose of *Gerard et al.* to sample at a point in which the radiation coming from the area illuminated by spot 3 were not on an unwritten area on the disc. The modification proposed by the rejection would render *Gerard et al.* so modified unsatisfactory for its intended purpose, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, there is no suggestion or motivation to make the proposed modification. *Gerard et al.* make no disclosure or suggestion to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time.

The modification proposed by the combination made by the rejection would change the principle of operation of *Gerard et al.* so modified, because there would no longer be a guarantee that an unwritten area of the disc was being sampled. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

The modification proposed by the rejection would render *Nakano* so modified unsatisfactory for its intended purpose because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, there is no suggestion or motivation to make the proposed modification. *Nakano* makes no disclosure or suggestion for to the measurement signal to be sampled at locations having mutually the same intensity level.

The modification proposed by the combination made by the rejection would change the principle of operation of *Nakano* so modified, because there would no longer be a guarantee that the focal error signal is sampled every sampling period T to stabilize the focus control. Therefore, the teachings of the references are not sufficient to render the claims *prima facie* obvious.

Appealed claim 16

Appealed claim 16 defines subject for the apparatus of appealed claim 15, wherein the predetermined time period determined by a measuring device that is reset after said sampling of the measurement signal. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter of the predetermined time period determined by a measuring device that is reset after said sampling of the measurement signal.

Appealed claim 17

Appealed claim 17 defines subject for the apparatus of appealed claim 15, wherein the measurement signal is held if the intensity is not comparatively high. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the measurement signal is held if the intensity is not comparatively high.

Appealed claim 18

Appealed claim 18 defines subject matter for the apparatus of appealed claim 15, wherein the sample signal causes the measurement signal to be sampled creating a sampled measurement signal, and the sampled measurement signal is employed to control focusing of said radiation beam. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter for the apparatus of appealed claim 15, wherein the sample signal causes the measurement signal to be sampled creating a sampled measurement signal, and the sampled measurement signal is employed to control focusing of said radiation beam.

Appealed claim 19

Appealed claim 19 defines subject matter for the apparatus of appealed claim 15, wherein the read system is adapted to operate in at least two operational modes including: an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter for the apparatus of appealed claim 15, wherein the read system is adapted to operate in at least two operational modes including: an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

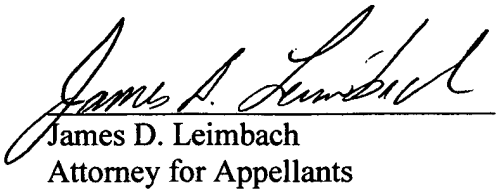
Appealed claim 20

Appealed claim 20 defines subject matter for the apparatus of appealed claim 15, wherein the measurement signal sampled when said intensity is comparatively high is indicative of the location of the scanning spot patterns on the optical information carrier. There is no disclosure or suggestion within *Nakano* or *Gerard et al.*, either alone or in combination for the subject matter for the measurement signal sampled when said intensity is comparatively high is indicative of the location of the scanning spot patterns on the optical information carrier.

Conclusion

In summary, the examiner's rejections of the claims are believed to be in error for the reasons explained above. The rejections of each of claims 1-20 should be reversed.

Respectfully submitted,



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APPENDIX I. Evidence on Appeal

"None"

APPENDIX II. Related Proceedings

"None"

APPENDIX III. Claims on Appeal

Please amend the claims to be in the form as follows:

1. A device for reading and/or writing information from/onto an optical information carrier; said information stored in the form of differences in intensity level, said device comprising:

read means including imaging means for imaging a radiation beam so as to form a scanning spot by means of which the information carrier is scanned, including detection means for generating a read signal which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot;

which device has an information transfer mode, in which the scanning spot is moved in a first direction with respect to the information carrier;

which device has a displacement mode, in which the scanning spot is moved in a second direction transverse to the first direction;

control means for controlling the imaging means in response to a measurement signal which is indicative of the degree of focusing of the radiation beam at the location of the scanning spot, which control means include sample and hold means for sampling and holding the measurement signal in response to a sample signal, wherein the sample signal (S_{CNTRL}) causes the measurement signal to be sampled at locations having mutually the same intensity level, and to cause sampling of the measurement signal if the measurement signal has not been measured within a predetermined period of time.

2. A device as claimed in Claim 1, wherein the sample signal is responsive to a time during which the measurement signal is held causing the measurement signal to be sampled when the time exceeds the predetermined period of time.

3. A device for reading and recording information on an optical information carrier, said information carrier having information stored therewithin as patterns formed by differences in intensity levels, said device comprising:

a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source, a radiation beam, a device for focusing said radiation beam, a scanning spot formed with said focused radiation beam and proximate said

optical information carrier, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier, and for generating a read signal which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot, said read system further adapted to derive, from said optical information carrier via said scanning spot, a measurement signal, a radial error signal, and an information signal; and

a signal generation system operatively coupled to said read system, said signal generation system adapted to produce a sample signal to control sampling of said measurement signal, said sample signal proportional to the intensity of said scanning spot, and wherein said sample signal causes the measurement signal to be sampled at locations having mutually the same intensity level and wherein said sample signal causes the measurement signal to be sampled if the measurement signal has not been sampled within a predetermined time interval.

4. The device of Claim 3, wherein said intensity of said scanning spot is an indicator of a location of the scanning spot with respect to the patterns provided in the information carrier.

5. The device of Claim 3, wherein said sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said signal generation system.

6. The device of Claim 3, wherein said signal separation system comprises:

a first input node for receiving said information signal;

a second input node for receiving a clock signal;

an output node for providing an output signal, wherein said output signal is said sample signal;

an AND gate having a first input connected to said first input node, and a second input connected to said second input node, said AND gate having an output for an AND gate output signal;

a counter having a clock input connected to said second input node, said counter having an output for a counter output signal, and an inverted rest input;

a comparator having a reference input and a counter input, said counter input adapted to receive the counter output signal, said comparator also having an output for a comparator output signal;

an OR gate having a first input for receiving said AND gate output signal, and a second input for receiving said comparator output signal, said OR gate having an output for an OR gate output signal, said OR gate output signal connected to said sample signal; and

an inverter having a first input connected to said OR gate output for receiving said OR gate output signal, said inverter having an output for an inverter output signal, said inverter output connected to said inverted reset input of said counter.

7. The device of Claim 3, wherein said read system is adapted to operate in two operational modes:

an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and

a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

8. The device of Claim 3, wherein said read system further comprises a system for generating a logic signal which indicates that information is recorded on the information carrier in the form of differences in level of a surface of the information carrier.

9. A method of reading information stored on an optical information carrier, said method comprising:

providing an optical information carrier, said optical information carrier having a multilevel structure, and said optical information carrier bearing data recorded as patterns formed in the information carrier by differences in intensity levels;

providing a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source, a radiation beam, a device for focusing said radiation beam, a scanning spot formed with said focused radiation beam and

proximate said optical information carrier, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier, and for generating a read signal which is indicative of the intensity of the radiation reflected from the information carrier at the location of the scanning spot, said read system further adapted to derive, from said optical information carrier via said scanning spot, a measurement signal, a radial error signal, and an information signal; and

providing a signal generation system operatively coupled to said read system, said signal generation system adapted to produce a sample signal to control sampling of said measurement signal, said sample signal proportional to the intensity of said scanning spot, and wherein said sample signal causes the measurement signal to be sampled at locations having mutually the same intensity level and if the measurement signal has not been sampled to cause sampling of the measurement single within a predetermined time period.

10. The method of Claim 9, wherein said intensity of said scanning spot is used as an indication of a location of the scanning spot with respect to the patterns provided in the information carrier.

11. The method of Claim 9, wherein said sample signal causes the measurement signal to be sampled at instants when said intensity is comparatively high and a periodic clock signal is received by said sign al generation system.

12. The method of Claim 9, wherein said signal generation system comprises:

a first input node for receiving said information signal;

a second input node for receiving a clock signal;

an output node for providing an output signal, wherein said output signal is said sample signal;

an AND gate having a first input connected to said first input node, and a second input connected to said second input node, said AND gate having an output for an AND gate output signal;

a counter having a clock input connected to said second input node, said counter having an output for a counter output signal, and an inverted reset input;

a comparator having a reference input and a counter input, said counter input adapted to receive the counter output signal, said comparator also having an output for a comparator output signal;

an OR gate having a first input for receiving said AND gate output signal, and a second input for receiving said comparator output signal, said OR gate having an output for an OR gate output signal, said OR gate output signal connected to said sample signal; and

an inverter having a first input connected to said OR gate output for receiving said OR gate output signal, said inverter having an output for an inverter output signal, said inverter output connected to said inverted reset input of said counter.

13. The method of Claim 9, wherein said read system is adapted to operate in two operational modes:

an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and

a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

14. The method of Claim 9, wherein said sampling of the measurement signal when said intensity is comparatively high results in a reduction of radial-to-vertical crosstalk.

15. An apparatus for employing an optical information carrier, said apparatus comprising:

device for reading and recording information on said optical information carrier, said information carrier having information stored therewithin as patterns formed by differences in levels:

a read system adapted to read data from said optical information carrier, said read system further comprising a radiation beam source, a radiation beam, a device for focusing said radiation beam, a scanning spot formed with said focused radiation beam and proximate said optical information carrier, said scanning spot having an intensity, a motion control device for controlling movement of said scanning spot relative to said optical information carrier, and a

device for deriving, from said optical information carrier via said scanning spot, a measurement signal, a radial error signal, and an information signal; and

a signal generation system operatively coupled to said read system, said signal generation system adapted to produce a sample signal to control sampling of said measurement signal, said sample signal proportional to the intensity of said scanning spot, and wherein said sample signal causes the measurement signal to be sampled when said intensity is comparatively high and wherein if the measurement signal is not sampled within a predetermined time period then said sample signal causes the measurement signal to be sampled.

16. The apparatus of Claim 15, wherein the predetermined time period determined by a measuring device that is reset after said sampling of the measurement signal.

17. The apparatus of Claim 15, wherein the measurement signal is held if said intensity is not comparatively high.

18. The apparatus of Claim 15, wherein the sample signal causes the measurement signal to be sampled creating a sampled measurement signal, and the sampled measurement signal is employed to control focusing of said radiation beam.

19. The apparatus of Claim 15, wherein said read system is adapted to operate in at least two operational modes including:

an information transfer mode wherein said motion control device provides motion of said scanning spot in a tangential first direction with respect to an axis about which said information carrier is rotated; and

a displacement mode wherein said motion control device provides motion of said scanning spot in a radial second direction, wherein said radial transverse direction is transverse to said first direction.

20. The apparatus of Claim 15, wherein the measurement signal sampled when said intensity is comparatively high is indicative of the location of the scanning spot patterns on the optical information carrier.